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Zachariah et al.

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(54) **INFLOW CONTROL DEVICE WITH DISSOLVABLE PLUGS**

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(58) **Field of Classification Search**
CPC E21B 43/12; E21B 33/12; E21B 2200/08; E21B 33/00; E21B 29/02
See application file for complete search history.

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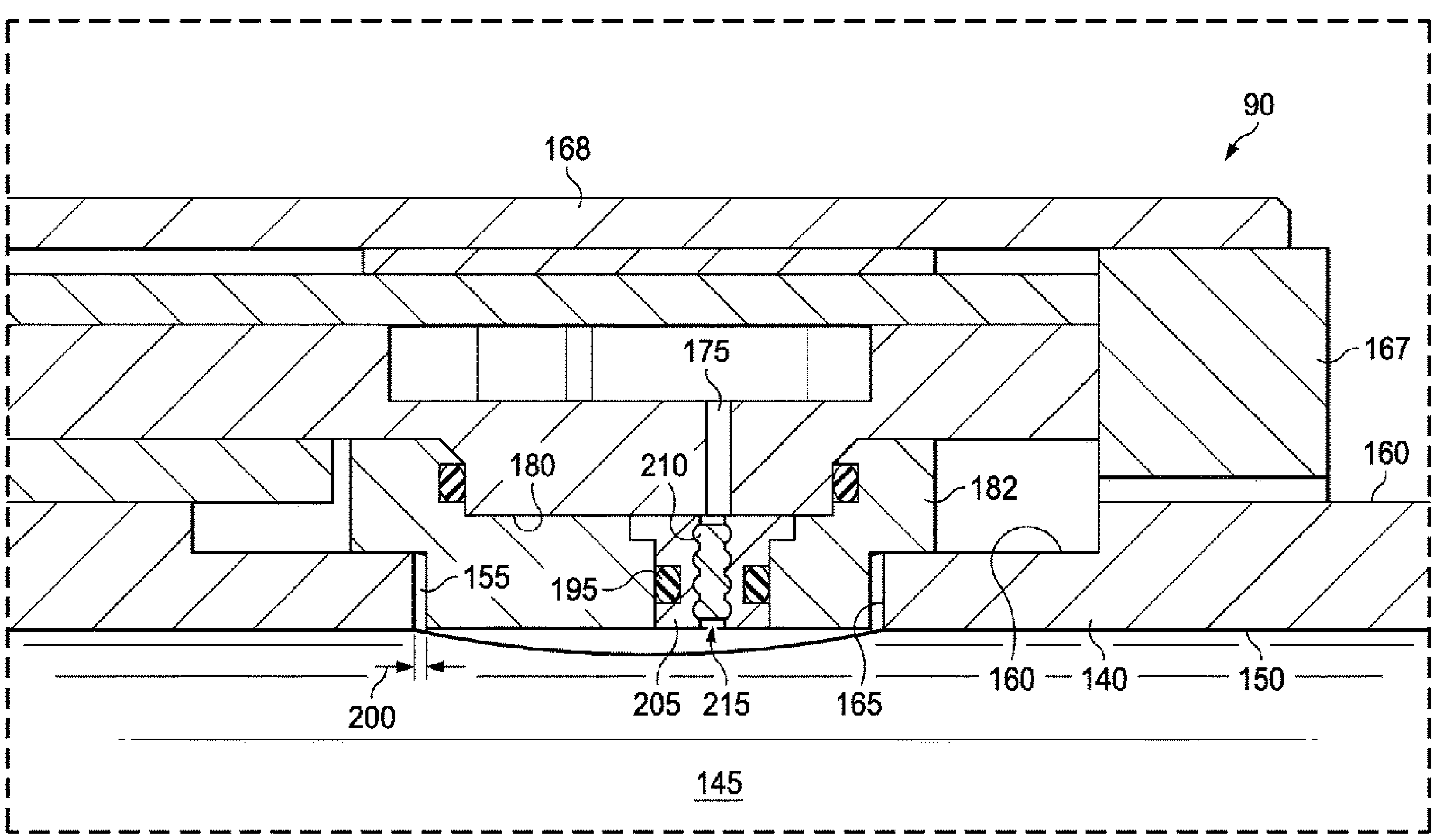
(57) **ABSTRACT**

A lower completion assembly includes a tubular comprising an interior passageway defined by an internal surface of the pipe and a port extending between external and internal surfaces of the tubular. The port is defined by a first surface that extends between the internal and external surfaces. The assembly also includes an inflow control device that is coupled to the external surface of the pipe and that comprises a fluid exit that is adjacent the port. The assembly has a first configuration and a second configuration. When in the first configuration a dissolvable plug extends across the fluid exit to fluidically isolate the fluid exit from the interior passageway and a gap is defined adjacent the first surface. When in the second configuration, the dissolvable plug does not extend across the fluid exit and the fluid exit is in fluid communication with the interior passageway.

18 Claims, 9 Drawing Sheets



(51) **Int. Cl.**
E21B 29/02 (2006.01)
E21B 33/13 (2006.01)

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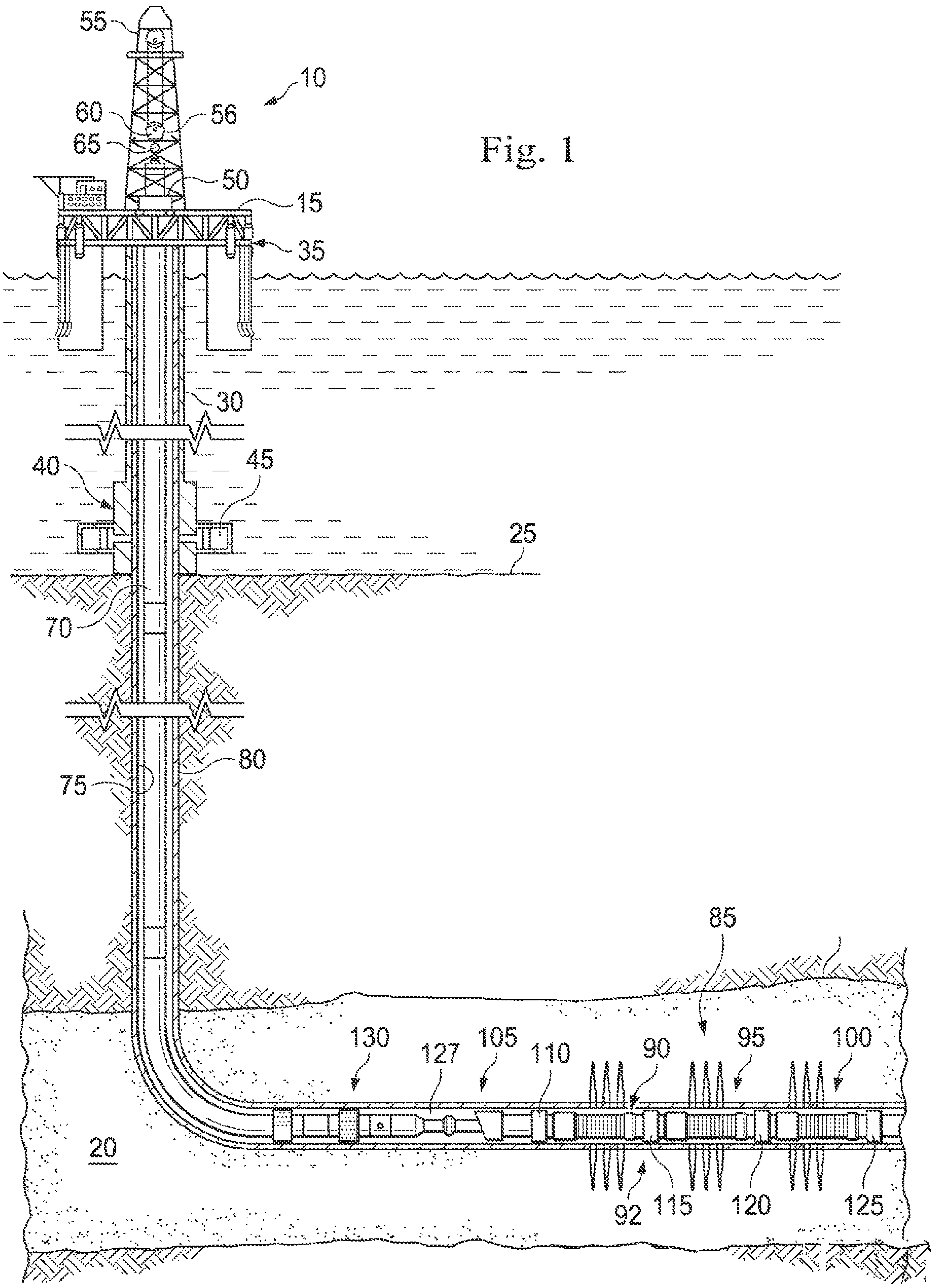
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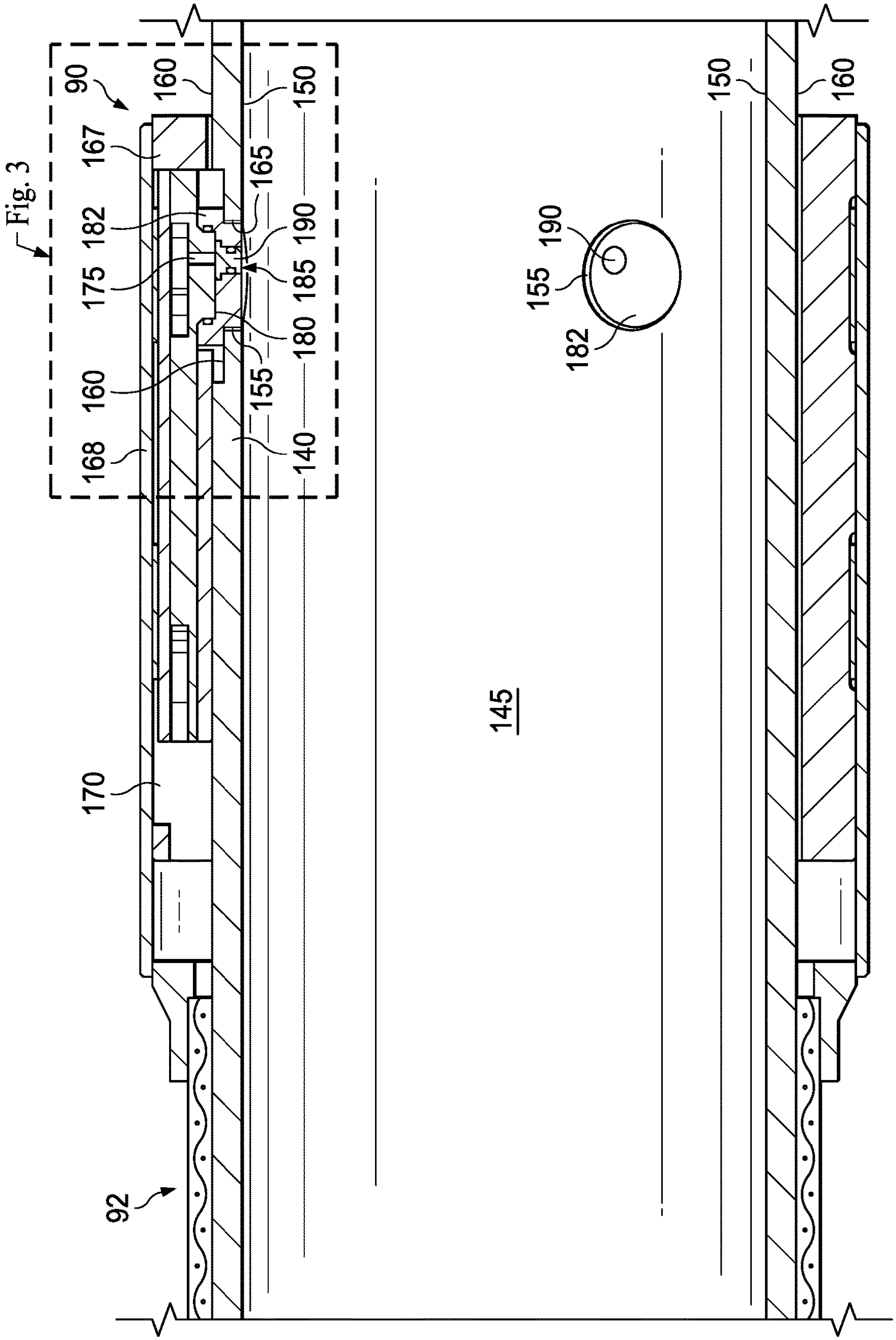
Fig. 1


90
Fig. 3
160
167
182
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92
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182
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Fig. 2

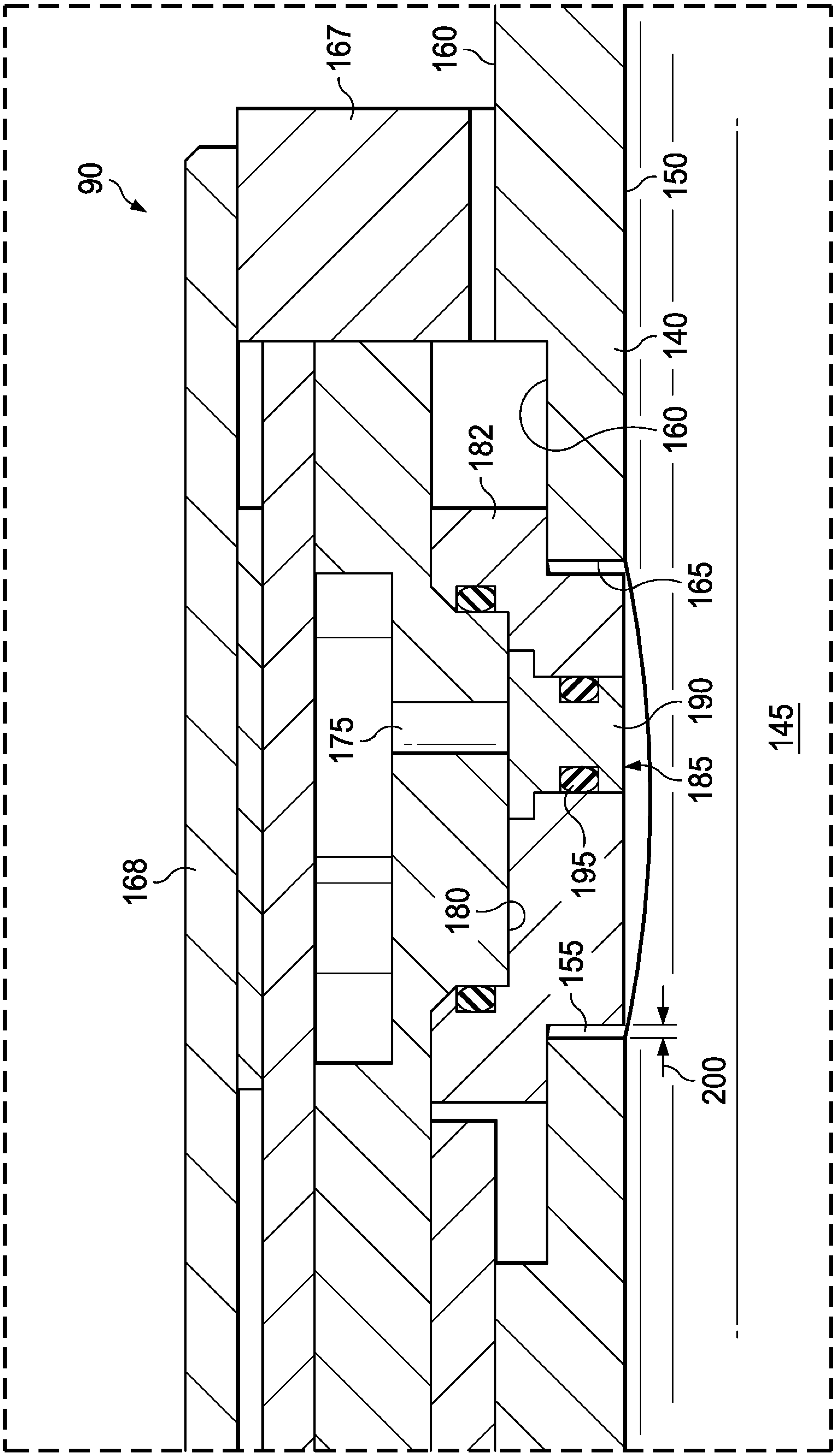
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Fig. 3

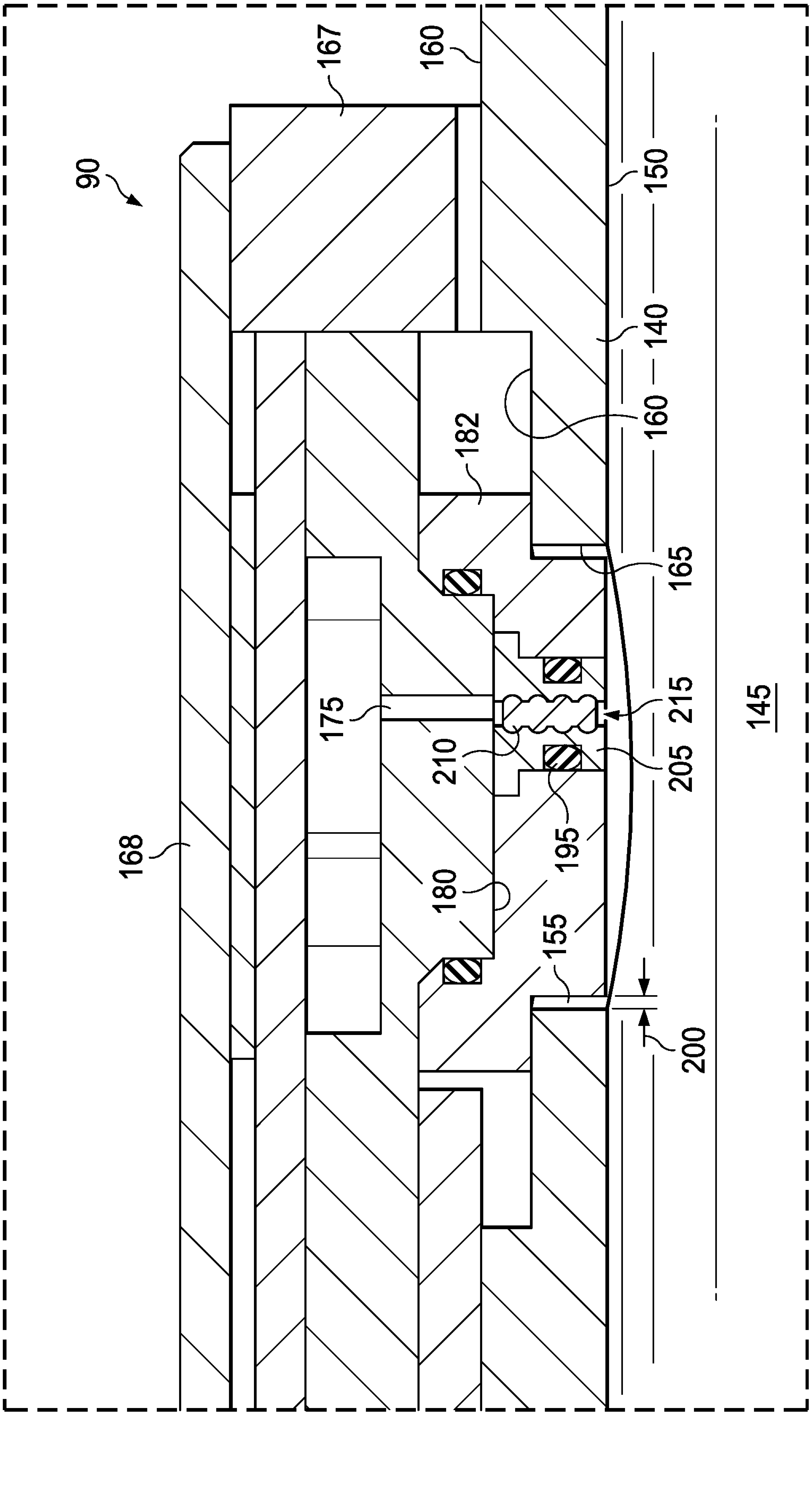

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Fig. 4

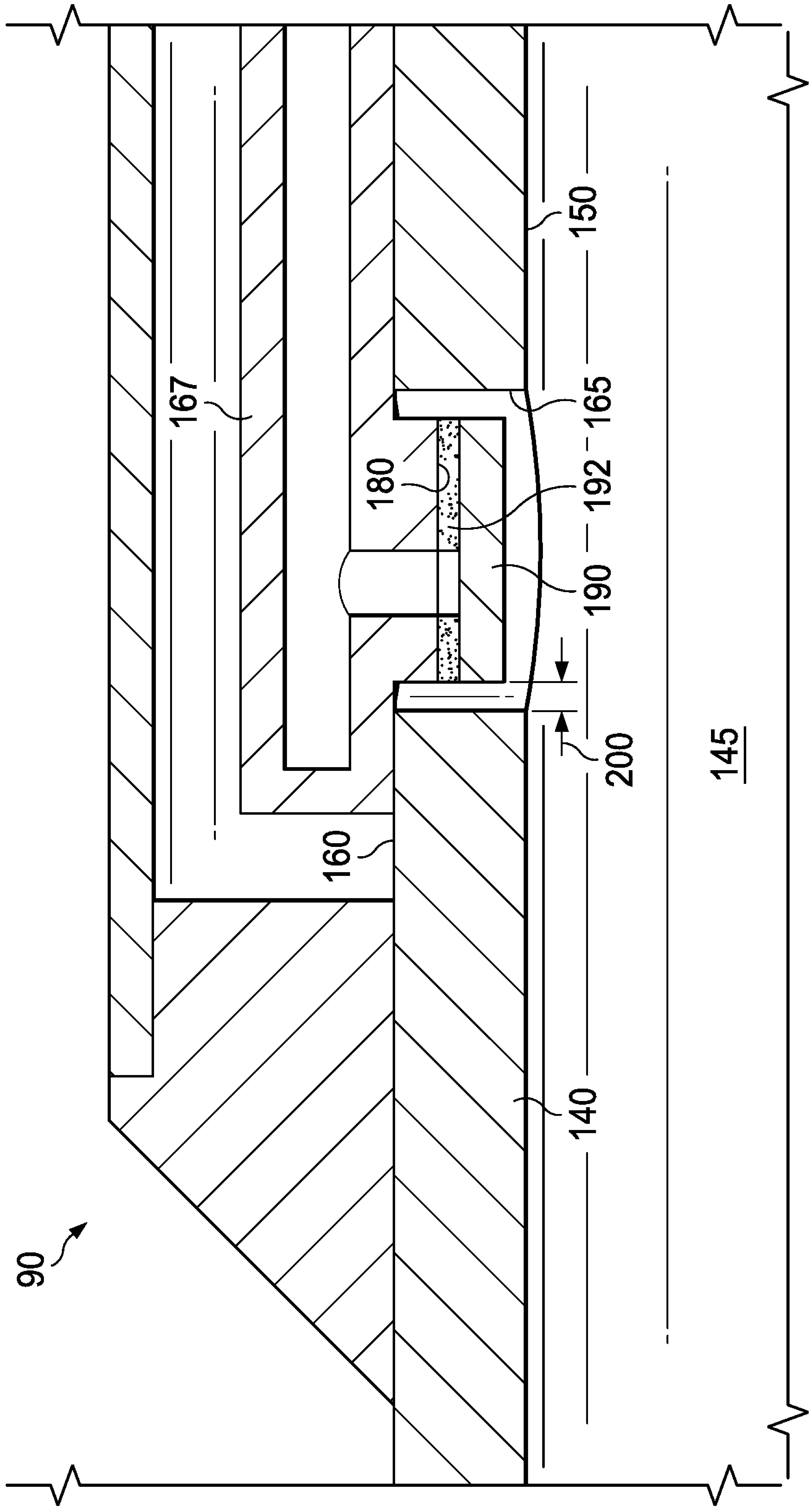

Fig. 5

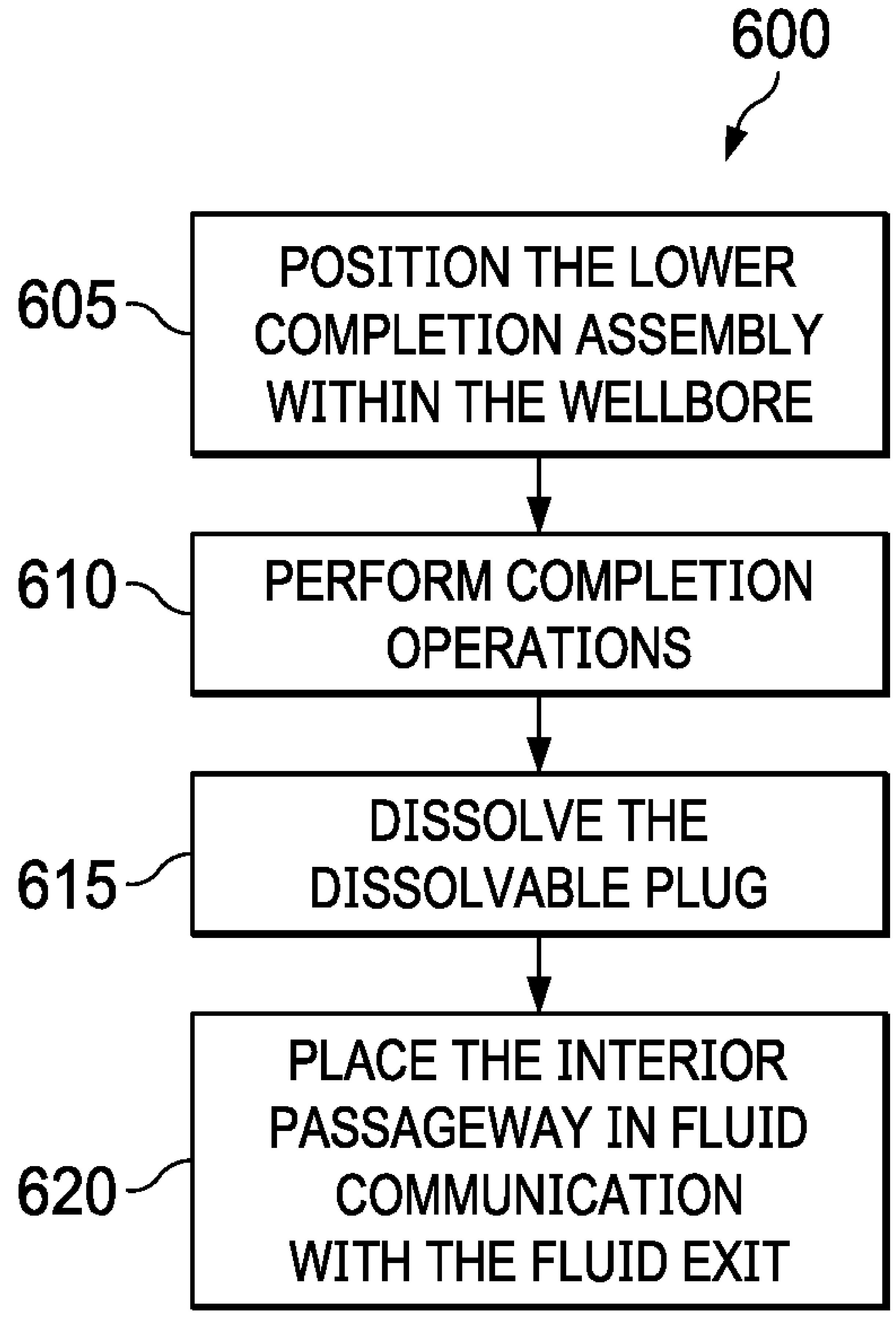
600
605
POSITION THE LOWER COMPLETION ASSEMBLY WITHIN THE WELLBORE
610
PERFORM COMPLETION OPERATIONS
615
DISSOLVE THE DISSOLVABLE PLUG
620
PLACE THE INTERIOR PASSAGEWAY IN FLUID COMMUNICATION WITH THE FLUID EXIT

Fig. 6

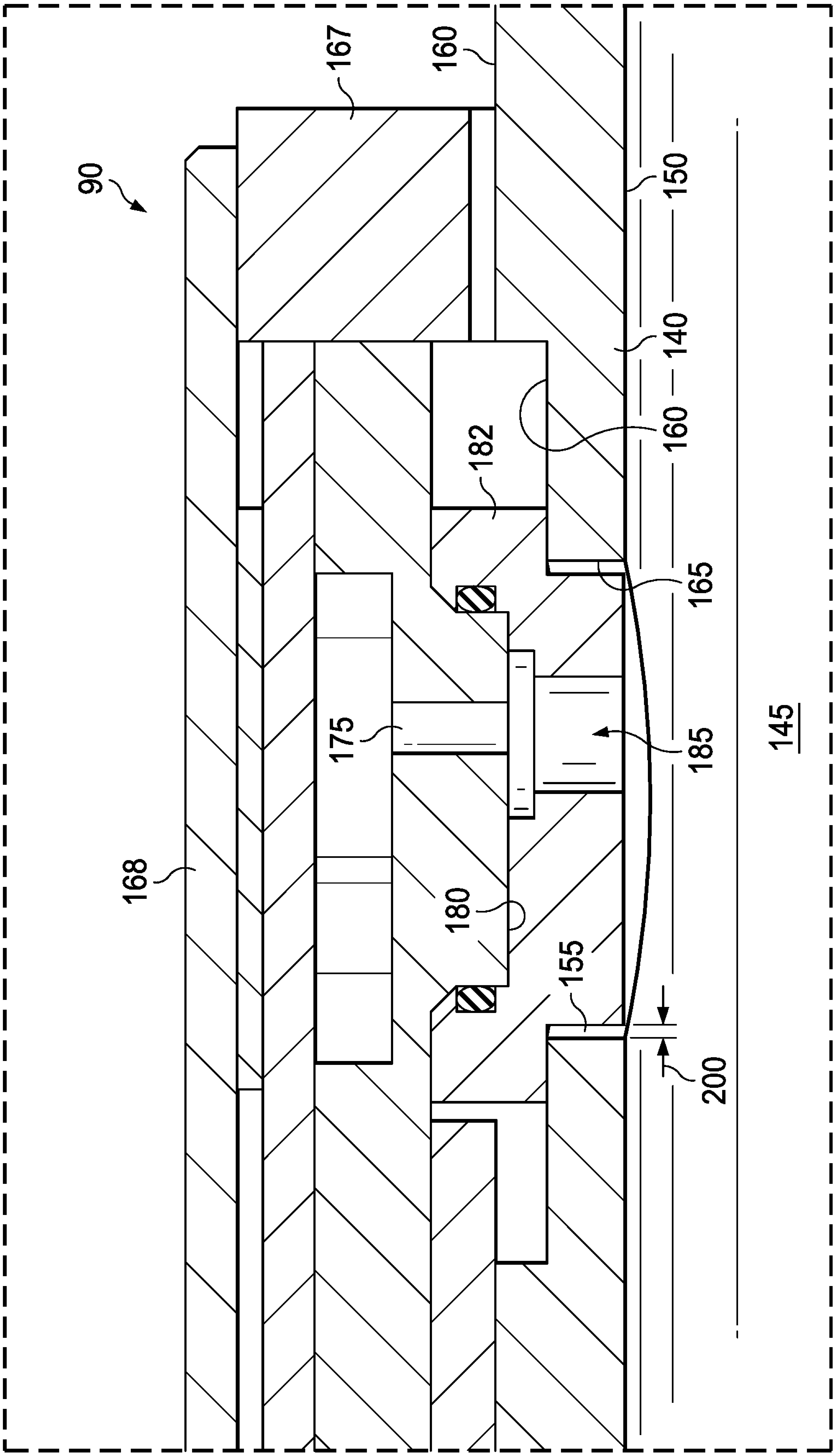

Fig. 7

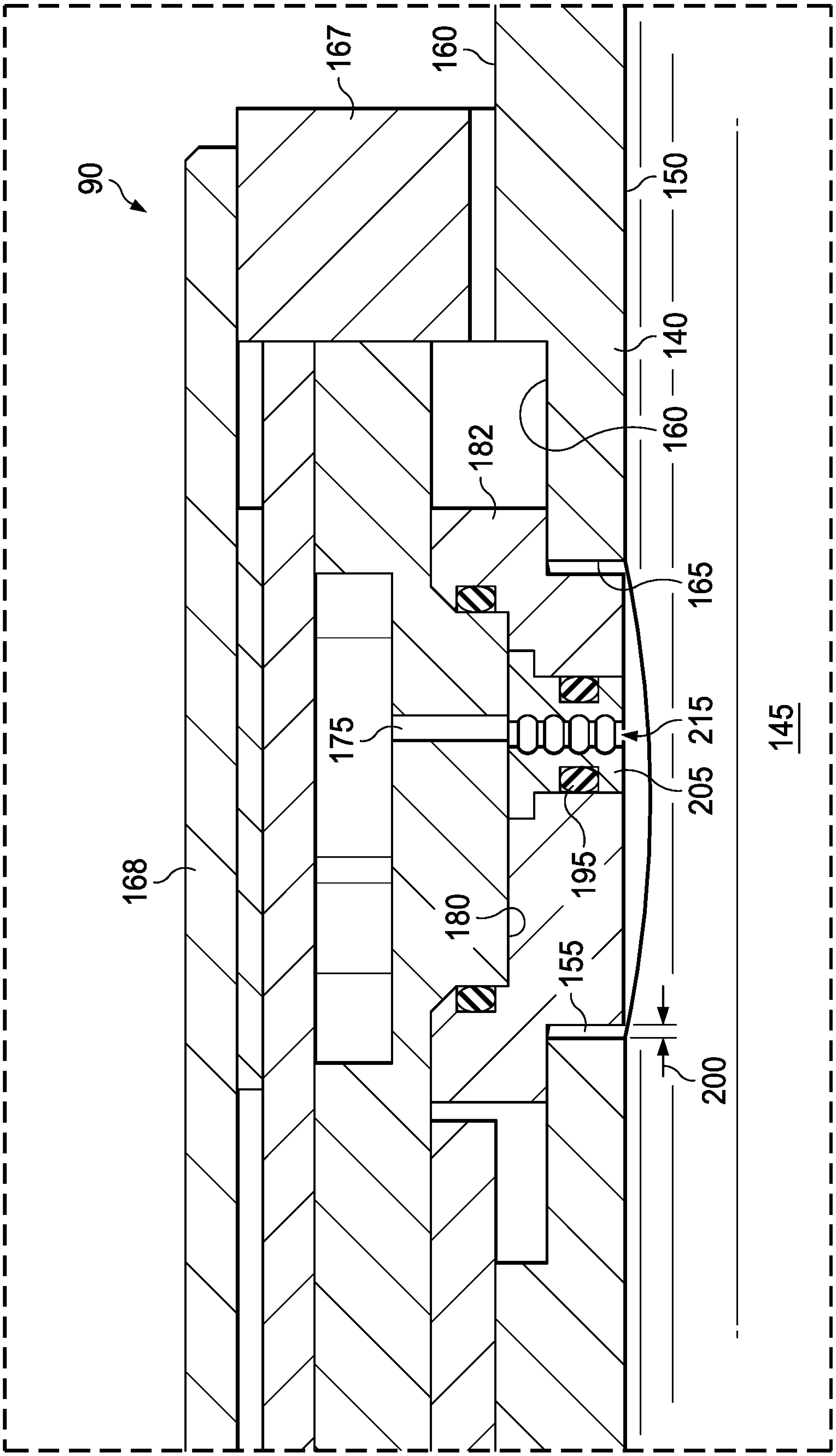
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Fig. 8

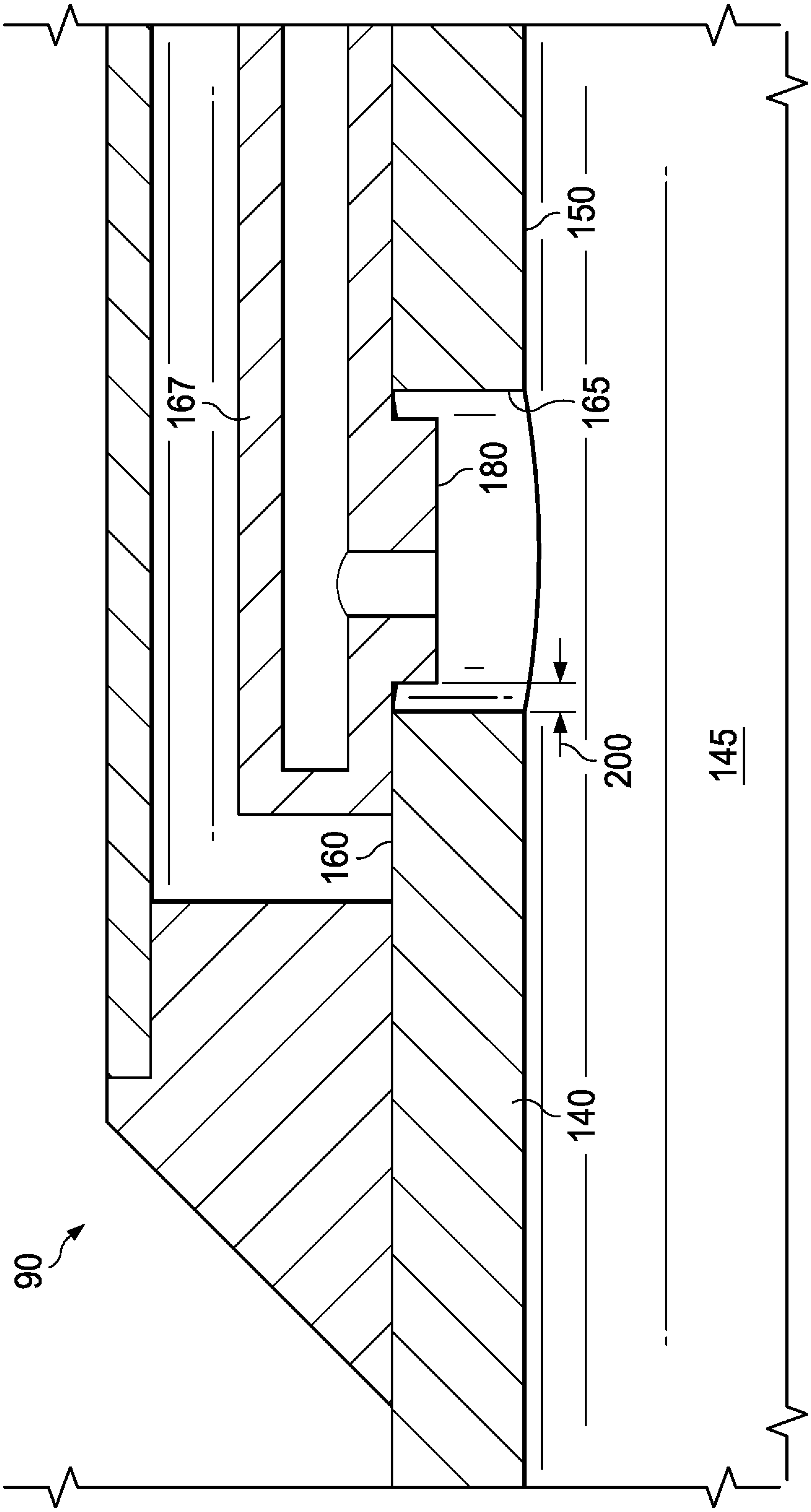

Fig. 9

INFLOW CONTROL DEVICE WITH DISSOLVABLE PLUGS

PRIORITY

The present application is a U.S. National Stage patent application of International Patent Application No. PCT/US2018/044295, filed on Jul. 30, 2018, the benefit of which is claimed and the disclosure of which is incorporated herein by reference in its entirety.

TECHNICAL FIELD

The present disclosure relates generally to a lower completion assembly having an inflow control device ("ICD") alternatively capable of maintaining a minimum pressure within a fluid passageway of the lower completion assembly and placing the ICD in fluid communication with the fluid passageway of the lower completion assembly.

BACKGROUND

In the process of completing an oil or gas well, a tubular is run downhole and used to communicate produced hydrocarbon fluids from the formation to the surface. Often, this tubular is coupled to an ICD that controls unwanted liquids, such as gas and/or water, from entering the tubular and that controls the flow of the fluids into the tubular. Generally, the fluids flow through the ICD into the tubular. However, the ability for fluid flow through the ICD is not desired during some completion operations, and as a result, the use of a wash pipe assembly if often necessary.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a schematic illustration of an offshore oil and gas platform operably coupled to an ICD according to an embodiment of the present disclosure;

FIG. **2** illustrates a sectional view of the ICD of FIG. **1** in a first configuration, according to an example embodiment of the present disclosure;

FIG. **3** illustrates an enlarged view of the ICD of FIG. **2** in a first configuration, according to an example embodiment of the present disclosure;

FIG. **4** illustrates an enlarged view of the ICD of FIG. **2** in a first configuration, according to another example embodiment of the present disclosure;

FIG. **5** illustrates a sectional view of the ICD of FIG. **1** in the first configuration, according to another example embodiment of the present disclosure;

FIG. **6** is a flow chart illustration of a method of operating the apparatus of FIGS. **1-5**, according to an example embodiment;

FIG. **7** illustrates the ICD of FIG. **3** in a second configuration, according to an example embodiment of the present disclosure;

FIG. **8** illustrates the ICD of FIG. **4** in a second configuration, according to an example embodiment of the present disclosure; and

FIG. **9** illustrates the ICD of FIG. **5** in a second configuration, according to an example embodiment of the present disclosure.

DETAILED DESCRIPTION

Referring initially to FIG. **1**, an upper completion assembly is installed in a well having a lower completion assembly

disposed therein from an offshore oil or gas platform that is schematically illustrated and generally designated **10**. However, and in some cases, a single trip completion assembly (i.e., not having separate upper and lower completion assemblies) are installed in the well. A semi-submersible platform **15** is positioned over a submerged oil and gas formation **20** located below a sea floor **25**. A subsea conduit **30** extends from a deck **35** of the platform **15** to a subsea wellhead installation **40**, including blowout preventers **45**. The platform **15** has a hoisting apparatus **50**, a derrick **55**, a travel block **56**, a hook **60**, and a swivel **65** for raising and lowering pipe strings, such as a substantially tubular, axially extending tubing string **70**.

A wellbore **75** extends through the various earth strata including the formation **20** and has a casing string **80** cemented therein. Disposed in a substantially horizontal portion of the wellbore **75** is a lower completion assembly **85** that includes at least one inflow control device ("ICD") such as ICD **90**, at least one screen assembly, such as screen assembly **92** or screen assembly **95** or screen assembly **100**, and may include various other components, such as a latch subassembly **105**, a packer **110**, a packer **115**, a packer **120**, and a packer **125**. An annulus **127** is defined between an external surface of the lower completion assembly **85** and an internal surface of the wellbore **75** (e.g., the casing **80** for a cased hole and the formation for an open hole).

Disposed in the wellbore **75** is an upper completion assembly **130** that couples to the latch subassembly **105** to place the upper completion assembly **130** and the tubing string **70** in communication with the lower completion assembly **85**. In some embodiments, the latch subassembly **105** is omitted.

Even though FIG. **1** depicts a horizontal wellbore, it should be understood by those skilled in the art that the apparatus according to the present disclosure is equally well suited for use in wellbores having other orientations including vertical wellbores, slanted wellbores, uphill wellbores, multilateral wellbores or the like. Accordingly, it should be understood by those skilled in the art that the use of directional terms such as "above," "below," "upper," "lower," "upward," "downward," "uphole," "downhole" and the like are used in relation to the illustrative embodiments as they are depicted in the figures, the upward direction being toward the top of the corresponding figure and the downward direction being toward the bottom of the corresponding figure, the uphole direction being toward the surface of the well, the downhole direction being toward the toe of the well. Also, even though FIG. **1** depicts an offshore operation, it should be understood by those skilled in the art that the apparatus according to the present disclosure is equally well suited for use in onshore operations. Further, even though FIG. **1** depicts a cased hole completion, it should be understood by those skilled in the art that the apparatus according to the present disclosure is equally well suited for use in open hole completions.

FIG. **2** illustrates a sectional view of the ICD **90** and a tubular **140**. FIG. **3** is an enlarged view of an outlet section of the ICD **90** and the tubular **140** of FIG. **2**. As illustrated, the ICD **90** is coupled to or forms a portion of the screen assembly **92**. However, in other embodiments, the ICD **90** receives downhole fluids directly from the annulus **127** without the fluids passing through the screen assembly **92**. The tubular **140** forms an interior passageway **145** defined by an internal surface **150** of the tubular **140**. One or more ports **155** extend between an external surface **160** of the tubular **140** and the internal surface **150**. The port **155** is defined by a surface **165** that extends between the internal and external surfaces **150** and **160** of the tubular **140**. Generally, the ICD **90** is coupled to the external surface **160** of the tubular **140**, directly or via another component. In some embodiments, the ICD **90** includes a housing **167** that has a fluid entrance **170** and a fluid exit **175**. In other embodiments, the housing **167** is separate from the ICD **90** and a cover sleeve **168** connects the screen assembly **92** with the ICD **90**. Regardless, the fluid exit **175** is formed through an external surface **180** of the housing **167** and/or the ICD **90** itself when the housing **167** is considered separate from the ICD **90**. As illustrated the fluid exit **175** extends in a radial direction (relative to a longitudinal axis of the tubular **140**), but in some embodiments the fluid exit **175** extends in a longitudinal direction or at any angle relative to the longitudinal axis of the tubular **140**. Generally, the fluid entrance **170** is in fluid communication with the screen assembly **92** and receives filtered fluid from the screen assembly **92**. In some embodiments, the ICD **90** distinguishes the types of downhole fluids flowing through the ICD **90** and allows wanted fluids to pass into the passageway **145** via the fluid exit **175** while restricting the flow of unwanted fluids into the passageway **145**. The lower completion assembly **85** includes insert tabs **182** that are sized to fit within the ports **155** of the tubular **140**. In some embodiments, the insert, or insert tab **182**, at least partially extends within the port **155**. In some embodiments, the tab **182** is fixed and sealed to the tubular **140** via a weld, a shrink fit, thermoplastic seal, etc. In some embodiments, each insert tab **182** includes or forms a passageway **185** aligned with, or at least adjacent to, the fluid exit **175** of the ICD **90**. The lower completion assembly **85** has a first configuration and a second configuration. When in the first configuration and as illustrated in FIGS. **2** and **3**, the lower completion assembly **85** includes a dissolvable plug **190** with the passageway **185**. In some embodiments, an annular seal **195** extends between the plug **190** and a surface of the insert tab **182** that forms the passageway **185**. In some embodiments, the annular seal **195** is an O-ring. In some embodiments, the annular seal **195** is an elastomeric seal, a metal sealing ring, a thermoplastic seal, etc. In some embodiments, the plug **190** includes a body in which an annular channel is formed to receive the annular seal **195**. In some embodiments, the body of the plug **190** includes a flanged end that forms an annular shoulder that is sized to fit with a corresponding annular shoulder formed in the passageway **185**. However, the body of the plug **190** and surface of the insert **182** may be threaded to form a threaded engagement of the plug **190** in the insert **182**. Other types of engagement of the plug **190** and the insert **182** are considered here. When in the first configuration, the dissolvable plug **190** extends across the fluid exit **175** to fluidically isolate the fluid exit **175** from the interior passageway **145**. When in the first configuration, the dissolvable plug **190** is configured to maintain a pressure within the interior passageway **145**. In some embodiments, the pressure is greater than or equal to a pressure associated with setting a packer, such as the packer **110**. Moreover, a gap **200** is defined adjacent the surface **165**. In some embodiments and as illustrated in FIGS. **2** and **3**, the gap **200** is an annular channel formed between the insert **182** and the surface **165** of the port **155**. In some embodiments, the gap **200** extends from the internal surface **150** of the tubular **140** to the external surface **160** of the tubular **140**.

FIG. **4** illustrates another embodiment of the ICD **90** in which the plug **190** is omitted and a housing **205** and a plug **210** are within the passageway **185**. In some embodiments, the housing **205** forms a passageway **215**. In some embodiments and when the lower completion assembly **85** is the first configuration, the dissolvable plug **210** extends across the fluid exit **175** to fluidically isolate the fluid exit **175** from the interior passageway **145**. In some embodiments and when the lower completion assembly **85** is in the first configuration, the dissolvable plug **210** is configured to maintain a pressure within the interior passageway **145**. In some embodiments, the pressure is greater than or equal to a pressure associated with setting a packer, such as the packer **110**. In some embodiments, the dissolvable plug **210** is press-fit into the passageway **215** to create a sealed surface. In some embodiments, the housing **205** has a similar shape to the plug **190**. In some embodiments, the material forming the housing **205** is different from the material forming the plug **210**, with the materials having different expansion rates. Thus, the housing **205** positions the plug **210** across the fluid exit **175** and allows for thermal expansion of the plug **210**.

FIG. **5** illustrates another embodiment of the ICD **90** in which the insert **182** is omitted and the plug **190** is bonded via bonding **192** to the surface **180** such that the plug **190** extends over the fluid exit **175** of the ICD **90**. As such, the gap is defined by the surface **165** and an external surface of the plug **190**. In some embodiments, the bonding **192** is an epoxy, a glue, a braze, or a soldering. In some embodiments, the plug **190** has a very high burst resistance, such as for example over 3,000 psi.

Generally, the ICD **90** of FIGS. **2**-**5**, when in the first configuration, avoids any flow in/out through the ICD **90** and into the passageway **145**.

In some embodiments, the plug **190** and/or **210** include or are formed from a metal, polymer, glassy materials (e.g., borate glass), and any combination thereof. Generally, the plug **190** and/or **210** are formed from materials that degrade in a wellbore fluid such as water, brine, or oil. In some embodiments, the plug **190** and/or **210** may be formed from a metal including aluminum alloys, magnesium alloys, and calcium alloys, for example. In some embodiments, the metal alloy is doped with iron, copper, nickel, tin, tungsten, or carbon in order to accelerate the galvanic corrosion. In some embodiments, the plug **190** and/or **210** are formed from a polymer that may include aliphatic polyester material, with a hydrolysable ester bond on the aliphatic polyester that makes it degrade in water. Examples include a poly (lactic acid) ("PLA") obtained from polycondensation of D- or L-lactic acid or from ring opening polymerization of lactide, which leads to semi-crystalline poly-L-lactide ("PLLA") and amorphous poly(L-lactide-co-D,L-lactide) ("PDLLA"). In some embodiments, a lower level of crystallinity is desired in order to promote degradation. Other examples include poly(glycolic acid) ("PGA"), poly(lactic-co-glycolic acid) ("PGLA"), Poly(caprolactone) ("PCL"), and Polyhydroxyalkonate. Other options of polymers include polyurethane, natural rubber, such as an epoxized natural rubber with 25% to 50 of the unsaturation in the rubber functionalized with epoxy groups, rubber modified polystyrene ("HIPS"), and acrylic rubber. The plug **190** and/or **210** can be strengthen by adding particles within a dissolvable metal matrix. In an example embodiment, this metal matrix composite is constructed from non-dissolving metal or non-dissolving ceramic. In an example embodiment, this non-dissolving particle is any shape including granules, rods, cones, acicular, et cetera. In an example embodiment, the ceramic granules are constructed from zirconia (including zircon), alumina (including fused alumina, chrome-alumina, and emery), carbide (including tungsten carbide, silicon carbide, titanium carbide, and boron carbide), boride (including boron nitride, osmium diboride, rhenium boride, and tungsten boride), nitride (including silica nitride), synthetic diamond, and silica. In an example embodiment, the ceramic is an oxide (like the alumina and zirconia) or a non-oxide (like the carbide, nitride, and boride). In an example embodiment, the ceramic granules have acute exterior angles to lock together.

In an example embodiment, as illustrated in FIG. **6** with continuing reference to FIGS. **1-5**, a method **600** of operating the ICD **90** includes positioning the lower completion assembly **85** within the wellbore **75** at step **605**; performing completion operations at step **610**; dissolving at least a portion of the plug **190** and/or **210** at step **615**; and placing the interior passageway **145** in fluid communication with the fluid exit **175** of the ICD **90** at step **620**.

At the step **605**, the lower completion assembly **85** is positioned within the wellbore **75**. Positioning the lower completion assembly **85** within the wellbore **75** defines the annulus **127**.

At the step **610**, completion operations are performed. For example, the passageway **145** is pressurized to a minimum pressure. Generally, pressurizing the passageway **145** to the minimum pressure includes pumping a mud or fluid down the tubing string **70** through the passageway **145**. As the lower completion assembly **85** is in the first configuration and as the plug **190** is pressure rated to a pressure that is greater than the minimum pressure, the lower completion assembly **85** is configured to pressurize and maintain the passageway **145** to the minimum pressure. In some embodiments, the packer **110** is in fluid communication with the interior passageway **145**, and pressurizing the passageway **145** to the minimum pressure results in setting the packer **110** relative the wellbore **75**. Thus, the minimum pressure in some embodiments is greater than or equal to a pressure associated with setting the packer **110**. In some embodiments, the step **610** may be omitted. In some embodiments and instead setting the packer **110**, any number of other deployment or completion operations is completed.

At the step **615**, at least a portion of the plug **190** is dissolved to place the lower completion assembly **85** in the second configuration as illustrated in FIGS. **7-9**. As illustrated, the plug **190** and/or the plug **210** do not extend across the fluid exit **175**. In some embodiments, dissolving the dissolvable plug **190** includes exposing the dissolvable plug **190** to a downhole or wellbore fluid. In an example embodiment, the wellbore fluid includes an organic or inorganic acid. In some embodiments, the wellbore fluid can include an acid with breakers, delayed release acid such as a lactic acid, a formic acid, a citric acid, and/or a hydrochloric acid. However, other methods of dissolving or breaking apart the plug **190** and/or the plug **210** are considered here, such as exposure to a specific temperature or change in temperature.

At the step **620**, the interior passageway **145** is placed in fluid communication with the fluid exit **175**. When the lower completion assembly **85** includes the insert **182**, the fluid exit **175** is in fluid communication with the passageway **145** via the passageway **185** formed in the insert **182**.

Any number of ports **155**, fluid exits **175**, and plugs **190** may be included, formed in, or coupled to, the tubular **140**, which in some embodiments is a base pipe or any machined mandrel. Additionally, pressurizing the passageway **145** to the minimum pressure is not limited to activating the packers **110**, **115**, **120** and **125** and instead, may be used during fracturing operations, etc.

In one embodiment, the ICD **90** is an autonomous ICD that has fluidic components, such as a fluidic vortex, and/or moving parts such as a moving plate. Generally, the autonomous ICD **90** changes amount of fluid restriction when the properties of the fluid change. However, the ICD **90** in some embodiments is any type of ICD.

In an example embodiment, during the operation of the assembly **85** and/or the execution of the method **600**, the ICD **90** can fluidically isolating the passageway **145** from the annulus **127** to: prevent accumulation of debris—from a circulation fluid, such as mud—within the ICD **90** during installation and positioning of the ICD **90** downhole; allow circulation without a wash pipe/string for circulation; delay or otherwise control the timing at which formation fluid begin to be received in the tubular **140**; and/or allow for the passageway **145** to be pressurized and maintain the pressure for setting packers or fracturing. Specifically, as the lower completion assembly **85** is in the first configuration during deployment, the need to run a wash string is significantly reduced or eliminated. The elimination of the running of a wash string saves time and expense.

Thus, a lower completion assembly has been described. Embodiments of the lower completion assembly may generally include a tubular that includes an interior passageway defined by an internal surface of the tubular; and a port extending between an external surface of the tubular and the internal surface of the tubular; wherein the port is defined by a first surface that extends between the internal surface and the external surface; and an inflow control device that is coupled to the external surface of the tubular and that comprises a fluid exit that is adjacent the port; wherein the lower completion assembly has a first configuration and a second configuration; wherein, when in the first configuration: a dissolvable plug extends across the fluid exit to fluidically isolate the fluid exit from the interior passageway; and a gap is defined adjacent the first surface; and wherein, when in the second configuration, the dissolvable plug does not extend across the fluid exit and the fluid exit is in fluid communication with the interior passageway. Any of the foregoing embodiments may include any one of the following elements, alone or in combination with each other:

When in the first configuration, the dissolvable plug is configured to maintain a pressure within the interior passageway.

The pressure is greater than or equal to a pressure associated with setting a packer.

Wherein when in the first configuration, the lower completion assembly further comprises an insert that at least partially extends within the port.

The insert comprises a first passageway.

The dissolvable plug extends within the first passageway of the insert.

The gap is defined between an external surface of the insert and the first surface.

When in the first configuration, the lower completion assembly further comprises a sealing element extending in the first passageway and between the insert and the dissolvable plug.

When in the first configuration, the lower completion assembly further comprises a housing within the first passageway; wherein the housing has a second passageway; and wherein the dissolvable plug is within the second passageway.

When in the first configuration, the dissolvable plug is bonded to the inflow control device.

When in the first configuration, the gap is defined between an external surface of the dissolvable plug and the first surface.

Wherein when in the first configuration, the gap is an annular channel.

When in the first configuration, the gap extends from the internal surface of the tubular to the external surface of the tubular.

Thus, a method has been described. Embodiments of the method may generally include positioning a lower completion assembly within a wellbore of a well to define an annulus between an external surface of the lower completion assembly and an internal surface of the wellbore, wherein the lower completion assembly comprises, when in a first configuration: a tubular comprising: an interior passageway defined by an internal surface of the tubular; and a port extending between an external surface of the tubular and the internal surface of the tubular; wherein the port is defined by a first surface that extends between the internal surface and the external surface; an inflow control device that is coupled to the external surface of the tubular and that comprises a fluid exit that is adjacent the port; and a dissolvable plug that extends across the fluid exit to fluidically isolate the fluid exit from the interior passageway; and wherein a gap is defined adjacent the first surface; and pressurizing, while the lower completion assembly is in the first configuration, the interior passageway of the tubular to a pressure; and dissolving the dissolvable plug to place the lower completion assembly into a second configuration and to place the annulus in fluid communication with the interior passageway. Any of the foregoing embodiments may include any one of the following elements, alone or in combination with each other:

The pressure is greater than or equal to a pressure associated with setting a packer.

When in the first configuration, the lower completion assembly further comprises an insert that at least partially extends within the port.

The insert comprises a first passageway.

The dissolvable plug extends within the first passageway of the insert.

The gap is defined between an external surface of the insert and the first surface.

When in the first configuration, the lower completion assembly further comprises a sealing element in the first passageway and between the insert and the dissolvable plug.

When in the first configuration, the lower completion assembly further comprises a housing within the first passageway; the housing includes a second passageway; and

The dissolvable plug extends within the second passageway.

When in the first configuration, the dissolvable plug is bonded to the inflow control device.

Wherein when in the first configuration, the gap is defined between an external surface of the dissolvable plug and the first surface.

When in the first configuration, the gap is an annular channel.

When in the first configuration, the gap extends from the internal surface of the tubular to the external surface of the tubular.

Dissolving the dissolvable plug to place the annulus in fluid communication with the interior passageway comprises exposing the dissolvable plug to a downhole fluid.

The foregoing description and figures are not drawn to scale, but rather are illustrated to describe various embodiments of the present disclosure in simplistic form. Although various embodiments and methods have been shown and described, the disclosure is not limited to such embodiments and methods and will be understood to include all modifications and variations as would be apparent to one skilled in the art. Therefore, it should be understood that the disclosure is not intended to be limited to the particular forms disclosed. Accordingly, the intention is to cover all modifications, equivalents and alternatives falling within the spirit and scope of the disclosure as defined by the appended claims.

In several example embodiments, while different steps, processes, and procedures are described as appearing as distinct acts, one or more of the steps, one or more of the processes, and/or one or more of the procedures could also be performed in different orders, simultaneously and/or sequentially. In several example embodiments, the steps, processes and/or procedures could be merged into one or more steps, processes and/or procedures.

It is understood that variations may be made in the foregoing without departing from the scope of the disclosure. Furthermore, the elements and teachings of the various illustrative example embodiments may be combined in whole or in part in some or all of the illustrative example embodiments. In addition, one or more of the elements and teachings of the various illustrative example embodiments may be omitted, at least in part, and/or combined, at least in part, with one or more of the other elements and teachings of the various illustrative embodiments.

In several example embodiments, one or more of the operational steps in each embodiment may be omitted. Moreover, in some instances, some features of the present disclosure may be employed without a corresponding use of the other features. Moreover, one or more of the above-described embodiments and/or variations may be combined in whole or in part with any one or more of the other above-described embodiments and/or variations.

Although several example embodiments have been described in detail above, the embodiments described are example only and are not limiting, and those skilled in the art will readily appreciate that many other modifications, changes and/or substitutions are possible in the example embodiments without materially departing from the novel teachings and advantages of the present disclosure. Accordingly, all such modifications, changes and/or substitutions are intended to be included within the scope of this disclosure as defined in the following claims. In the claims, means-plus-function clauses are intended to cover the structures described herein as performing the recited function and not only structural equivalents, but also equivalent structures.

Illustrative embodiments and related methods of the present disclosure are described below as they might be employed in a pressure actuated inflow control device. In the interest of clarity, not all features of an actual implementation or method are described in this specification. It will of course be appreciated that in the development of any such actual embodiment, numerous implementation-specific decisions must be made to achieve the developers' specific goals, such as compliance with system-related and business-related constraints, which will vary from one implementation to another. Moreover, it will be appreciated that such a development effort might be complex and time-consuming, but would nevertheless be a routine undertaking for those of ordinary skill in the art having the benefit of this disclosure. Further aspects and advantages of the various embodiments and related methods of the disclosure will become apparent from consideration of the following description and drawings.

What is claimed is:

1. A lower completion assembly, comprising:
a tubular comprising:
an interior passageway defined by an internal surface of the tubular; and
a port extending between an external surface of the tubular and the internal surface of the tubular;
wherein the port is defined by a first surface that extends between the internal surface and the external surface; and
an inflow control device that is coupled to the external surface of the tubular and that comprises a fluid exit that is adjacent the port;
wherein the lower completion assembly has a first configuration and a second configuration;
wherein, when in the first configuration:
a dissolvable plug extends across the fluid exit to fluidically isolate the fluid exit from the interior passageway; and
a gap is defined adjacent the first surface;
wherein, when in the second configuration, the dissolvable plug does not extend across the fluid exit and the fluid exit is in fluid communication with the interior passageway; and
wherein when in the first configuration, the gap extends from the internal surface of the tubular to the external surface of the tubular.

2. The lower completion assembly of claim **1**, wherein when in the first configuration, the dissolvable plug is configured to maintain a pressure within the interior passageway.

3. The lower completion assembly of claim **2**, wherein the pressure is greater than or equal to a pressure associated with setting a packer.

4. The lower completion assembly of claim **1**,
wherein when in the first configuration, the lower completion assembly further comprises an insert that at least partially extends within the port;
wherein the insert comprises a first passageway;
wherein the dissolvable plug extends within the first passageway of the insert; and
wherein the gap is defined between an external surface of the insert and the first surface.

5. The lower completion assembly of claim **4**, wherein when in the first configuration, the lower completion assembly further comprises a sealing element extending in the first passageway and between the insert and the dissolvable plug.

6. The lower completion assembly of claim **4**,
wherein when in the first configuration, the lower completion assembly further comprises a housing within the first passageway;
wherein the housing has a second passageway; and
wherein the dissolvable plug is within the second passageway.

7. The lower completion assembly of claim **1**, wherein when in the first configuration, the dissolvable plug is bonded to the inflow control device.

8. The lower completion assembly of claim **7**, wherein when in the first configuration, the gap is defined between an external surface of the dissolvable plug and the first surface.

9. The lower completion assembly of claim **1**, wherein when in the first configuration, the gap is an annular channel.

10. A method, comprising:
positioning a lower completion assembly within a wellbore of a well to define an annulus between an external surface of the lower completion assembly and an internal surface of the wellbore, wherein the lower completion assembly comprises, when in a first configuration:
a tubular comprising:
an interior passageway defined by an internal surface of the tubular; and
a port extending between an external surface of the tubular and the internal surface of the tubular;
wherein the port is defined by a first surface that extends between the internal surface and the external surface;
an inflow control device that is coupled to the external surface of the tubular and that comprises a fluid exit that is adjacent the port; and
a dissolvable plug that extends across the fluid exit to fluidically isolate the fluid exit from the interior passageway; and
wherein a gap is defined adjacent the first surface; and
pressurizing, while the lower completion assembly is in the first configuration, the interior passageway of the tubular to a pressure; and
dissolving the dissolvable plug to place the lower completion assembly into a second configuration and to place the annulus in fluid communication with the interior passageway;
wherein when in the first configuration, the gap extends from the internal surface of the tubular to the external surface of the tubular.

11. The method of claim **10**, wherein the pressure is greater than or equal to a pressure associated with setting a packer.

12. The method of claim **10**,
wherein when in the first configuration, the lower completion assembly further comprises an insert that at least partially extends within the port;
wherein the insert comprises a first passageway;
wherein the dissolvable plug extends within the first passageway of the insert; and
wherein the gap is defined between an external surface of the insert and the first surface.

13. The method of claim **12**, wherein when in the first configuration, the lower completion assembly further comprises a sealing element in the first passageway and between the insert and the dissolvable plug.

14. The method of claim **13**,
wherein when in the first configuration, the lower completion assembly further comprises a housing within the first passageway;
wherein the housing includes a second passageway; and
wherein the dissolvable plug extends within the second passageway.

15. The method of claim **10**, wherein when in the first configuration, the dissolvable plug is bonded to the inflow control device.

16. The method of claim **15**, wherein when in the first configuration, the gap is defined between an external surface of the dissolvable plug and the first surface.

17. The method of claim **10**, wherein when in the first configuration, the gap is an annular channel.

18. The method of claim **10**, wherein dissolving the dissolvable plug to place the annulus in fluid communication with the interior passageway comprises exposing the dissolvable plug to a downhole fluid.

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